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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,192	08/04/2005	Stig Holm	10400-000141/US	4001

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EXAMINER	
KOSAR, AARON J	

ART UNIT	PAPER NUMBER
1651	

MAIL DATE	DELIVERY MODE
07/14/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/524,192	HOLM ET AL.	
	Examiner	Art Unit	
	AARON J. KOSAR	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) *9-11 and 13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/11/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I in the reply filed on October 19, 2007 is acknowledged. The traversal is on the ground(s) that the amended claims include contacting the slurry with biogas-producing bacteria. This is not found persuasive because the process may use numerous devices and does not require the device of Group II for its practice, and because the device is not specially adapted for the process of Group I, because the device is not limited by an intended use or by the process of Group I and thus may be used in other methods. The requirement is still deemed proper and is therefore made FINAL.

Claims 1-13 are pending of which claims 9-11, and 13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on October 19, 2007. Claims 1-8 and 12 are pending and have been examined on the merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 5 and 8, is unclear because the claim recites the abbreviation "TS"; however abbreviations may have multiple interpretations and it is unclear what composition(s) is/are intended by the abbreviation. Abbreviations in the first instance of claims should be expanded upon with the abbreviation indicated in parentheses. The abbreviations can be used thereafter. Clarification is required.

Claim 1 is unclear because the claim recites "a slurry" in line 4 and "the slurry" in line 6 (twice) and in line 7; however it is unclear if these are the same or different composition(s). Clarification is required.

Claim 2 recites the terms "is mixed", "a liquid", "a slurry", and "a dry solids content"; however, it is unclear if the terms are the mixing, the liquid, the slurry, and the dry solids content of claim 1 or if the terms are different steps and components. Clarification is required.

Claim 3 recites "grain and/or dried grain offal and/or mixtures thereof" in line 2; however, the claims do not rigorously require that the organic matter (in claim 1) contain total dry solids or an origin in grain and/or dried grain offal, and thus it is unclear what composition(s) claim 3 intends to further limit. Clarification is required.

Claim 4 recites that grain "is present" and "in the form of whole and screened grains"; however, the claims do not rigorously require a grain in any component and thus it is unclear what compositions contain grains and/or a whole or screened form of the grain, if any. Clarification is required.

Claim 5 recites the term "type"; however it is unclear what materials are embraced by or excluded by the term. Clarification is required.

Claim 7 recites that the liquid "is digested sludge which is removed from the reactor"; however it is unclear how the "sludge...removed from the reactor" corresponds to the slurry, and it is also unclear if/how the "digested" sludge (claim 7) corresponds to the "digesting the slurry" (claim 1). Clarification is required.

All other claims depend directly or indirectly from rejected claims and are, therefore, also rejected under USC 112, second paragraph for the reasons set forth above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanai, *et al* (1983, U.S. Patent 4,386,159; IDS).

Kanai teaches a method of anaerobically producing a biogas from an organic material. Kanai teaches grinding the organic material/organic matter (see, e.g., col 1, line 23 and col 4, lines 40-41), mixing the organic material with seed sludge, water, or recovered CO2-containig liquid/liquids (see, e.g., col 3, lines 27 and 37-40; and col 4, lines 40-43), and providing a juice-

like liquid (slurry). Kanai further teaches charging (feeding) the juice-like liquid into a fermentation tank (feeding) and fermenting (contacting with a biogas-producing bacteria, digesting) the liquid under a CO_2 atmosphere to produce methane (biogas) (see, e.g., Example 2, col 5, lines 20-26).

Kanai does not expressly teach a process having the combination of the various instantly-claimed dry solids content ranges (15-45%, 5-10%, 20-40%, or at least 70% by weight).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to provide a slurry such as taught by Kanai in a variety of dry solid content amounts as instantly claimed because Kanai teaches grinding the organic matter into particulate matter (that is, completely solid/dry matter; column 2, lines 28-32); adding water to the organic matter and to obtain a preferred concentration of 30-400 g organic material per liter (3-40% by weight of the liquid mixture composition) or 100-300 g/l (10-30% by weight); and adjusting the dry weight of the organic material to "about 1-10% by weight" (column 3, lines 23-27). The result-effective adjustment of these and other types of conventional working conditions is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan.

Thus, the invention defined by claims 1, 2, and 6-8, as a whole, is *prima facie* obvious over the cited reference, especially in the absence of evidence to the contrary.

Claims 3-5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanai, *et al* as applied to claims 1,2, and 6-8 above, and further in view of Fischer *et al* (1981, U.S. Patent 4,252,901; reference A).

Kanai is relied upon as applied above. Kanai also teaches that waste matter from a variety of sources, including waste matter from farming and food factories are known sources of organic materials for anaerobic decomposition and methane production (see, e.g., col 1, lines 6-12).

Kanai does not expressly teach using whole or screened grain and/or grain offal as a starting organic material.

Fischer teaches a method of anaerobically producing methane from "any feed material containing suitable organic materials" (see, e.g., col 3, lines 3-6). Fischer also beneficially teaches that these feed materials and suitable starting organic materials can comprise waste from the farming and food products industries, waste from the animal husbandry and food products industries, as well as various plants, such as grasses and grains (see, e.g., col 3, lines 6-22).

It would have been obvious to a person of ordinary skill in the art at the time the claimed invention was made to modify the method of Kanai by including and/or substituting grain as the starting organic matter therein because Kanai teaches that a variety of organic matter may be used for methane production, including food and farming waste and because said person of ordinary skill in the art recognizing that Fischer beneficially teaches that grains, like food and farming waste, are effective starting sources of organic matter/feed recognized as useful for the same purpose - i.e., for methane-producing reactions involving slurries (see, e.g., MPEP 2144.06). The result-effective adjustment of particular conventional working conditions (e.g., determining appropriate form(s) of a grain including whole, screened, or dried offal; and/or

determining particular amounts or proportions of components within such a method) is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan within the biogas production art having the cited references before him/her as a guide.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AARON J. KOSAR whose telephone number is (571)270-3054. The examiner can normally be reached on Monday-Thursday, 7:30AM-5:00PM, ALT. Friday,EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on (571) 272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aaron J Kosar/
Examiner, Art Unit 1651

/Christopher R. Tate/
Primary Examiner, Art Unit 1655